UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION V
ILLINOIS DISTRICT OFFICE
1819 W. PERSHING RD.
CHICAGO, ILLINOIS 60609

November 18, 1976

Mr. Kenneth L. Baumann
Supervisor, Field Operations, Region IIIC, DWPC
Illinois Environmental Protection Agency
2125 South First Street
Champaign, Illinois 61820

Dear Mr. Baumann:

Enclosed are two copies of our compliance monitoring report for Revere Copper and Brass Company, Clinton, Illinois, conducted on October 4-5, 1976. If you have any questions regarding the data and other information in this report, please feel free to contact me or Mr. S. Bernotas of my staff.

Sincerely yours,

L. E. Townsend
Director

Enclosure (2 copies)
As stated

cc: Mr. T. McSwiggin, IEPA
Mr. J. Forneris, IEPA

COMPLIANCE MONITORING FIELD REPORT
REVERE COPPER AND BRASS, INC.
CLINTON, ILLINOIS 61727

OCTOBER 4-5, 1976

PERFORMED BY

U. S. ENVIRONMENTAL PROTECTION AGENCY
ILLINOIS DISTRICT OFFICE
1819 WEST PERSHING ROAD
CHICAGO, ILLINOIS 60609

COMPLIANCE MONITORING FIELD REPORT
USEPA-ILLINOIS DISTRICT OFFICE

I. Permittee Identification

Revere Copper and Brass, Inc.
P.O. Box 250
Clinton, Illinois 61727

Phone: 217-935-3111

Responsible Official
Mr. R. W. Wakefield, P.E., Plant Engineer

NPDES Permit Number: IL 0002356, effective date, July 11, 1975

Receiving Stream:
Revere Drainage Ditch, a tributary of Coon Creek

II. Date of Inspection

October 4-5, 1976

III. Participants

Permittee
R. W. Wakefield, P.E., Plant Engineer

USEPA - Illinois District Office
Sylvester Bernotas, Sanitary Engineer, (Author)
Howard Buchanan, Program Analyst

IV. Objective

To determine if permittee is in compliance with the NPDES permit conditions. The inspection was requested by the Enforcement Division (contact: A. Leder). The IEPA had recommended an inspection by USEPA during the 1st Quarter of FY 1977.

V. Summary of Findings and Conclusions

Discharge 001, process water, had suspended solids of 27 mg/l, exceeding the 15 mg/l permit limit. All other permit parameters were met. The effluent was cleaner than the receiving stream but had a slight trace of green color due to algae.

Discharge 002, storm water and boiler blowdown has no permit limits. However, our sample showed 29.6 mg/l total copper, a very high concentration compared to the 1.0 mg/l Illinois effluent standard. This is reflected in the high copper concentration of 5.78 mg/l downstream of the outfalls. Rain during the sampling caused parking lot runoff and the sample may have caught the first flush off the parking lot.

The permittee may not meet the June 30, 1977 final effluent requirement of 1.0 mg/l total copper. It appears that the source of copper is fallout from the copper melting furnaces. The City of LaSalle wastewater treatment plant treats the wash water from the billet acid cleaning process.

On September 24, 1976 the permittee mailed to Region V, Permit Branch, a progress report concerning the schedule of compliance to meet the July 1, 1977 permit requirements.

Permittee samples and measures at permit frequency and uses standard methods for analyses.

VI. Description of Permittee

Revere Copper and Brass at Clinton, Illinois manufactures copper tubing from 4½-inch pierced billets. Also, they make cooking utensils at this plant. Approximately 700 persons are employed producing 54 tons per day of the products. The plant was not operating at capacity.

Billets are made by melting No. 1 copper in a gas-fired furnace, continuous casting of molten metal and cutting to desired lengths. An electric furnace melts copper for casting single billets on a conveyor. Tubing is drawn from the cast billets.

Water from the settling pond is reused in the tube mill. See Appendix 2 and 3 for the pond and storm water discharges and Appendix 4 for the location map.

VII. Description of Compliance Monitoring Survey

At discharge 001, twenty-four hourly samples were obtained with an automatic sampler and time composited. Flow was determined from permittee's flow meter.

At discharge 002 grab samples were taken of the storm water. It was raining during this sampling and there was flow from this discharge. Permittee is required to sample during flows from the storm sewer. Flow was estimated because there is no weir or measuring device at this discharge.

Standard USEPA sampling, preservation and analytical techniques were used. Samples were split with Revere Copper and Brass. Mr. R. W. Wakefield, P. E. was cooperative and helpful. A copy of our laboratory results were mailed to permittee. Mr. Wakefield has requested a copy of our report.

A tour through the tube mill showed no unusual sources of pollution. Discharges and sampling points are shown in the Appendixes.

VIII. Discussion

The data tabulation, Appendix 1, shows the laboratory results, permit limits and Illinois effluent standards. As previously discussed, copper concentration appears to be a problem. Permittee exceeded the Illinois effluent standards for suspended solids and copper in discharges 001 and 002. Total iron also exceeded the effluent standard. All other standards were met. See tabulated data for values. The drainage ditch has low flows so there is little dilution before the ditch discharge reaches Coon Creek.

APPENDIXES

1. Data Tabulation
2. Pond and Storm Water Discharges
3. " " " " "
4. Location Map

USEPA-V
ILDO, S&AD
APPENDIX 1

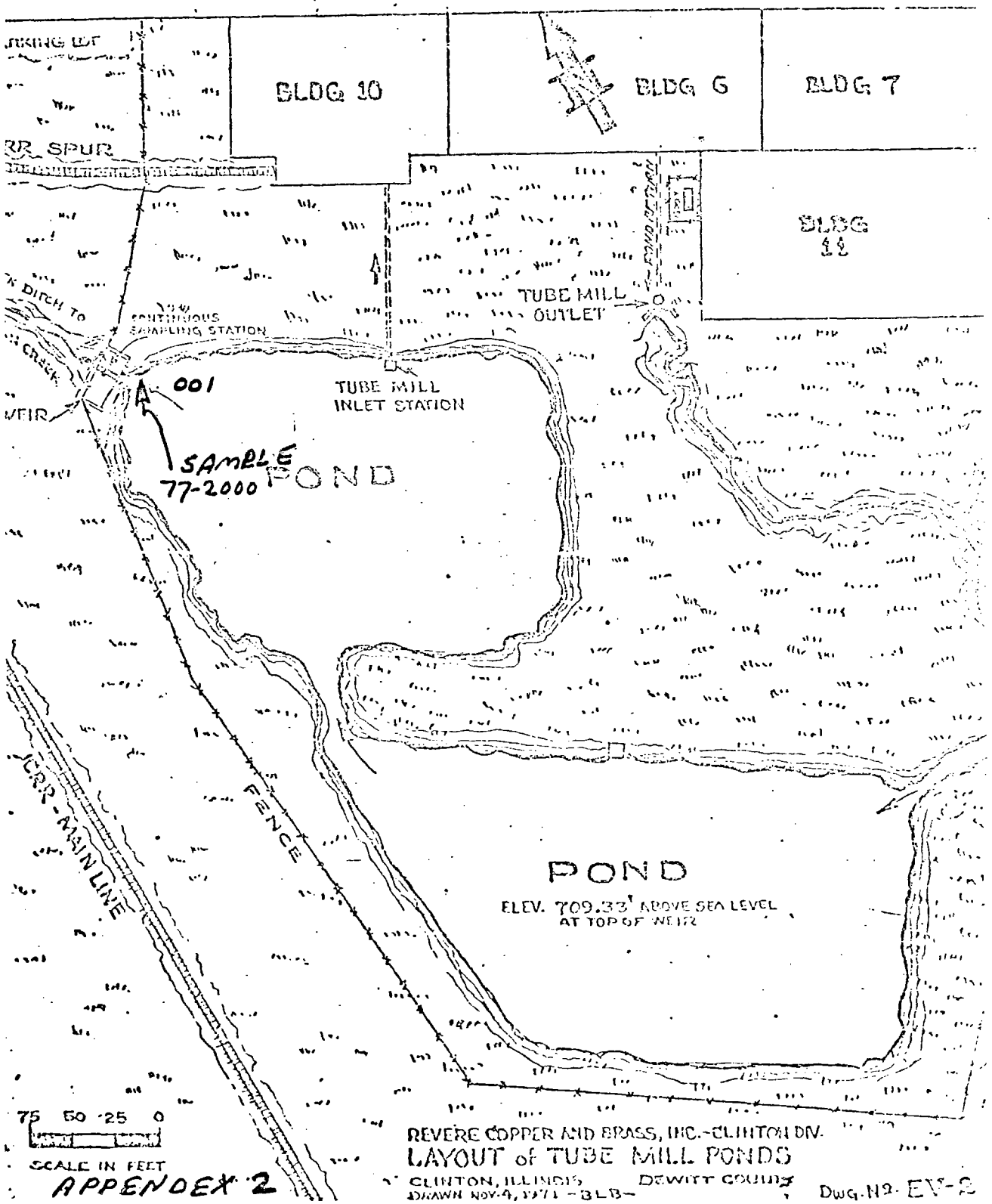
DATA TABULATION OF LABORATORY ANALYSIS
REVERE COPPER AND BRASS, INC.
CLINTON, ILLINOIS

(Results in mg/l unless otherwise indicated)

ILDO Sample No.	77-2000	77-2001	77-2002	77-2009	77-2010		
Parameter	Process Water 001	Storm Water 002	Intake City Water	Up-Stream	Down-Stream	(001) Permit Limit	Illinois Effluent Standard
Flow (MGD)	0.172	0.040					
Water Temp. (°C)	21	18	-	17	20		
pH(pH units)Field	8.3	5.7	7.5	7.8	7.9	6-9	5-10
pH(pH units)Lab	8.35	6.02	7.45				
Alkalinity	340	39	404				
Spec. Cond (µmho/cm)	940	487	1050				
Dissolved Solids	564	292	630				
Suspended Solids	27 1/ 2/	46 2/	<5			15	12
COD	48	63	20				
Ammonia-N	0.20	2.77	2.39				
Kieldahl Nitrogen	1.90	5.43	2.81				
NO_2+ NO_3-N	0.68	2.37	0.04				
Cyanide	<0.01	<0.01	<0.01				25
Phenolics (µg/l)	6	8	<5				300
T. Phosphorus	0.16	0.08	0.14				
Chloride	90	29	96				
Fluoride	2.27	0.33	0.93				15
Sulfate	21	124	10				
T. Aluminum	<100	267	<100	<100	<100		
T. Arsenic (µg/l)	12	3	11	17	10		250
T. Barium "	180	131	206	367	180		2000
T. Boron "	200	81	241	261	187		
T. Cadmium "	<10	<10	<10	<10	<10		150
T. Chromium "	86	314	<12	<12	57		1000
Hex.Chromium "	56	<10	<10				300
T. Cobalt "	<5	22	<5	<5	<5		
T. Copper "	2180 2/	29,600 2/	29	90	5780	3000	1000
T. Iron "	562	4300 2/	520	665	860		2000
T. Lead "	<30	67	<30	<30	<30		100
T. Manganese "	155	391	134	23	199		1000
T. Mercury "	0.3	0.3	0.2				0.5
T. Nickel "	<25	513	<25	<25	99		1000
T. Silver "	<13	<13	<13				100
T. Tin "	<50	<50	<50	<50	<50		
T. Vanadium "	<100	<100	<100	<100	<100		
T. Zinc "	41	476	135	16	97		1000
Oil & Grease	<5	<5				15	15

1/ Exceeds NPDES Permit Limits
2/ Exceeds Illinois Effluent Standards

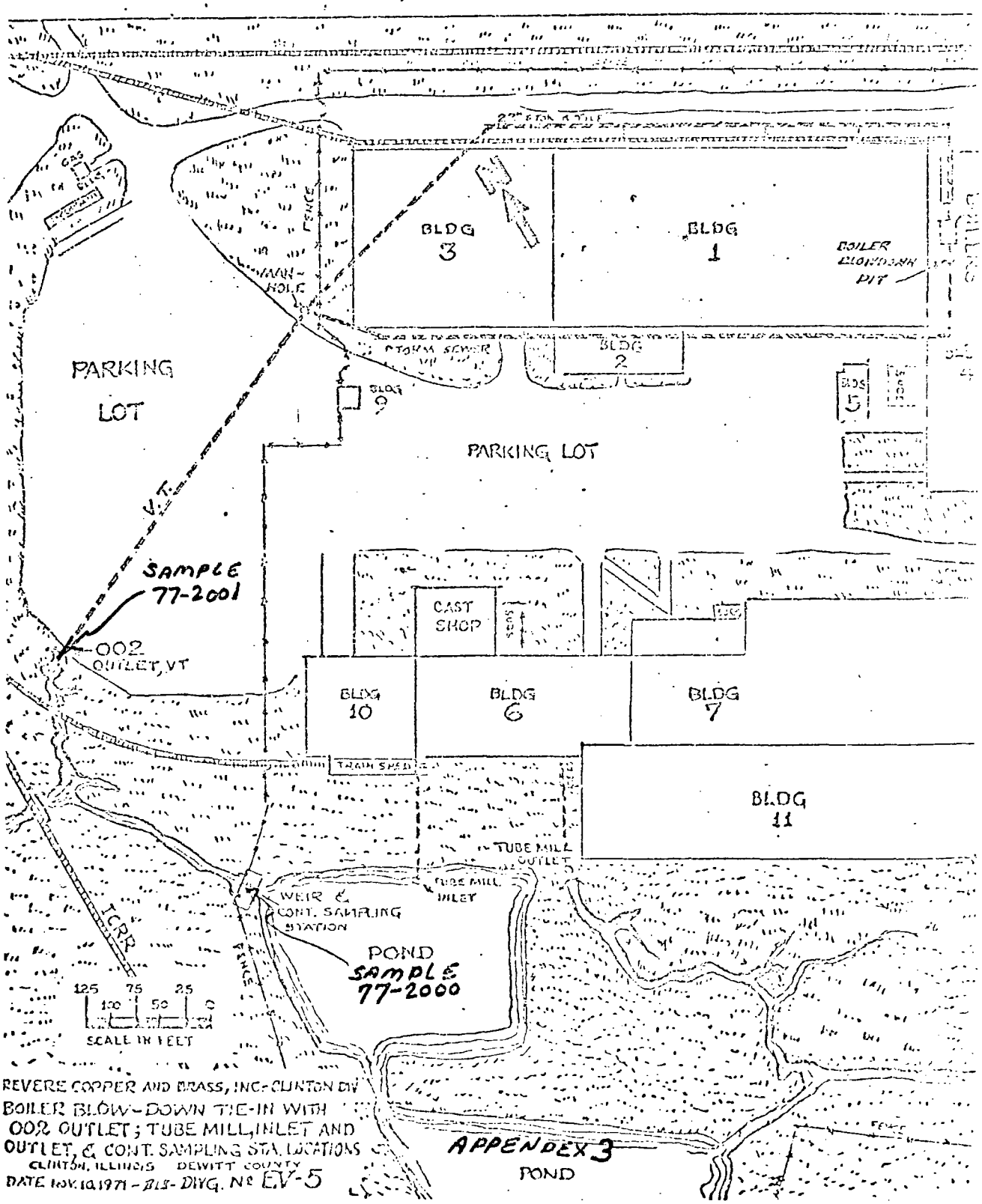
2720407



APPENDEX 2

REVERE COPPER AND BRASS, INC.-CLINTON DIV.
LAYOUT of TUBE MILL PONDS
CLINTON, ILLINOIS DEWITT COUNTY
DRAWN NOV-4, 1971 -BLB- Dwg.No. EV-2

27204107


BLDG 3
BLDG 1
BOILER BLOWDOWN PIT
MAN-HOLE
FENCE
STORM SEWER
BLDG 2
BLDG 9
BLDG 5
PARKING LOT
PARKING LOT
SAMPLE 77-2001
002 OUTLET, VT
CAST SHOP
BLDG 10
BLDG 6
BLDG 7
TRAIN SHED
BLDG 11
TUBE MILL OUTLET
TUBE MILL INLET
WEIR & CONT. SAMPLING STATION
POND
SAMPLE 77-2000
ICRR
FENCE
125 75 25
100 50 0
SCALE IN FEET
REVERE COPPER AND BRASS, INC - CLINTON DIV
BOILER BLOW-DOWN TIE-IN WITH 002 OUTLET; TUBE MILL, INLET AND OUTLET, & CONT. SAMPLING STA. LOCATIONS
CLINTON, ILLINOIS DEWITT COUNTY
DATE NOV. 10, 1971 - BLB - DWG. No EV-5
APPENDEX 3
POND